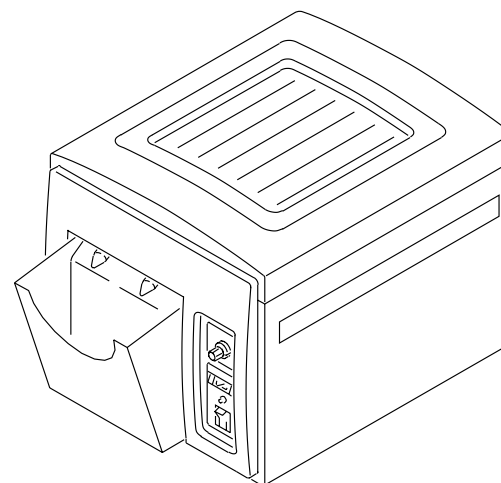




HEALTH IMAGING

SITE SPECIFICATIONS **for the** ***Kodak X-Omat 2000/2000A* PROCESSOR**



PLEASE NOTE The information contained herein is based on the experience and knowledge relating to the subject matter gained by Eastman Kodak Company prior to publication.

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Warning

To avoid hazardous conditions, keep floors and floor coverings around your *Kodak X-Omat* Processor and associated drains clean and dry at all times. Any accumulation of fluids from mixing tanks, drain lines, etc., should be cleaned up immediately. In the event of an accumulation of liquid due to backup, overflow, or other malfunctions of the drain associated with your *X-Omat* Processor, call a plumber or other contractor to correct any problem with the drain. Kodak accepts no responsibility or liability whatsoever for the serviceability of any drain connected to or associated with a *Kodak X-Omat* Processor. Such drains are the sole responsibility of the customer.

Certification

The following Agencies have approved the Processor:		The Processor meets the following EMI limits:
UL	listed to Standard No. 122	FCC Part 15, Class A Limits
CSA	certified to Standard C22.2, No. 220	C108.8-M1983 of Canada, Class A Limits
		Directive 87/308/EEC and EN 5502 of the ECC

Checklist

Section	Topic	Reference Page	Completed
Architectural	Processor	4	
	Access	7	
	Replenishment Tanks	8	
	Opening for a Through-the-Wall Installation	8	
Plumbing	Codes	12	
	Drain	12	
	Water Supply	12	
Electrical	Basic Service	13	
	Main Power Disconnect Switch	13	
Heating, Ventilation, and Air Conditioning	Room Specifications	14	
	Building Exhaust System	14	
	Procedure for Checking the Negative Pressure	15	
Appendix A	Suggested Room Layout	16	

Radio Interference



Caution

This equipment generates, uses, and can radiate radio-frequency energy. If the equipment is not installed and used according to the instructions, it may cause interference to radio communications. The equipment has been tested and found to comply with the limits for a *Class A* computing device pursuant to Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at the user's own expense will be required to take whatever measures may be required to correct the interference.

This digital apparatus does not exceed the *Class A* limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Table of Contents

Description	Page
Architectural	4
Parts and Accessories	4
Specifications	5
Through-the-Wall Installation	8
Plumbing	11
Parts	11
Specifications	12
Electrical Specifications	13
Heating, Ventilation, and Air Conditioning	14
Parts	14
Specifications	14
Checking the Negative Pressure	15
Appendix A	16
Suggested Room Layout	16

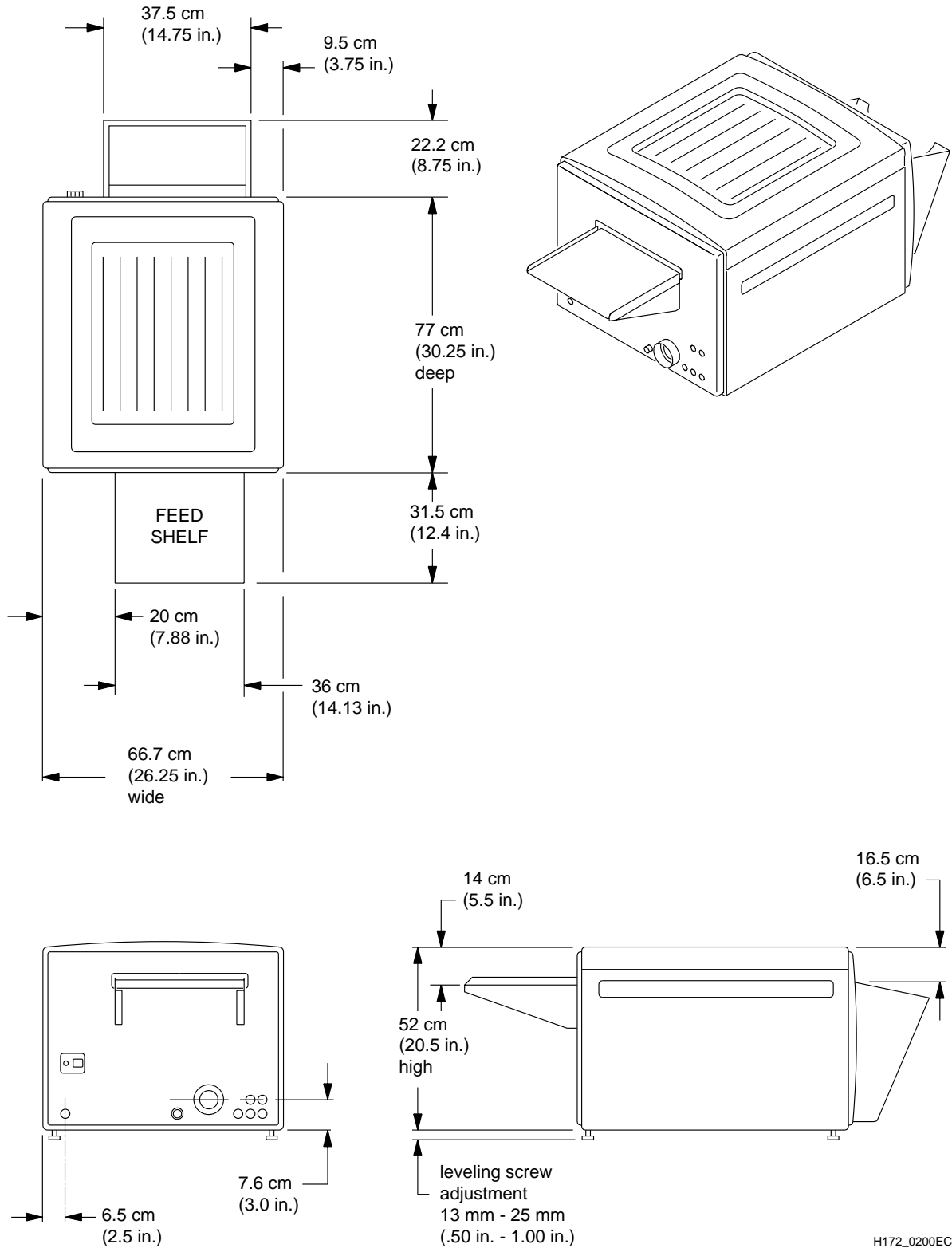
Section 1: Architectural

Parts and Accessories

Part No.	Description	Quantity	How to obtain the part
261413	Seismic Kit, for use on the Processor or the Stand	1	If necessary, the customer may order these Kits from Kodak.
808 1176*	Kodak M35/M43 X-Omat Mounting Stand	1	
3H4195	Light-Lock Gasket for a Through-the-Wall Installation	1	These parts are packed with the Processor. See Page 8 .
-	Hooks, Bolts, Nuts, and Washers for a Through-the-Wall Installation	2 - 4	
-	Plywood or equivalent material for a Through-the-Wall Installation	1	The customer must obtain the material locally.

* This item is a catalog number.

Specifications



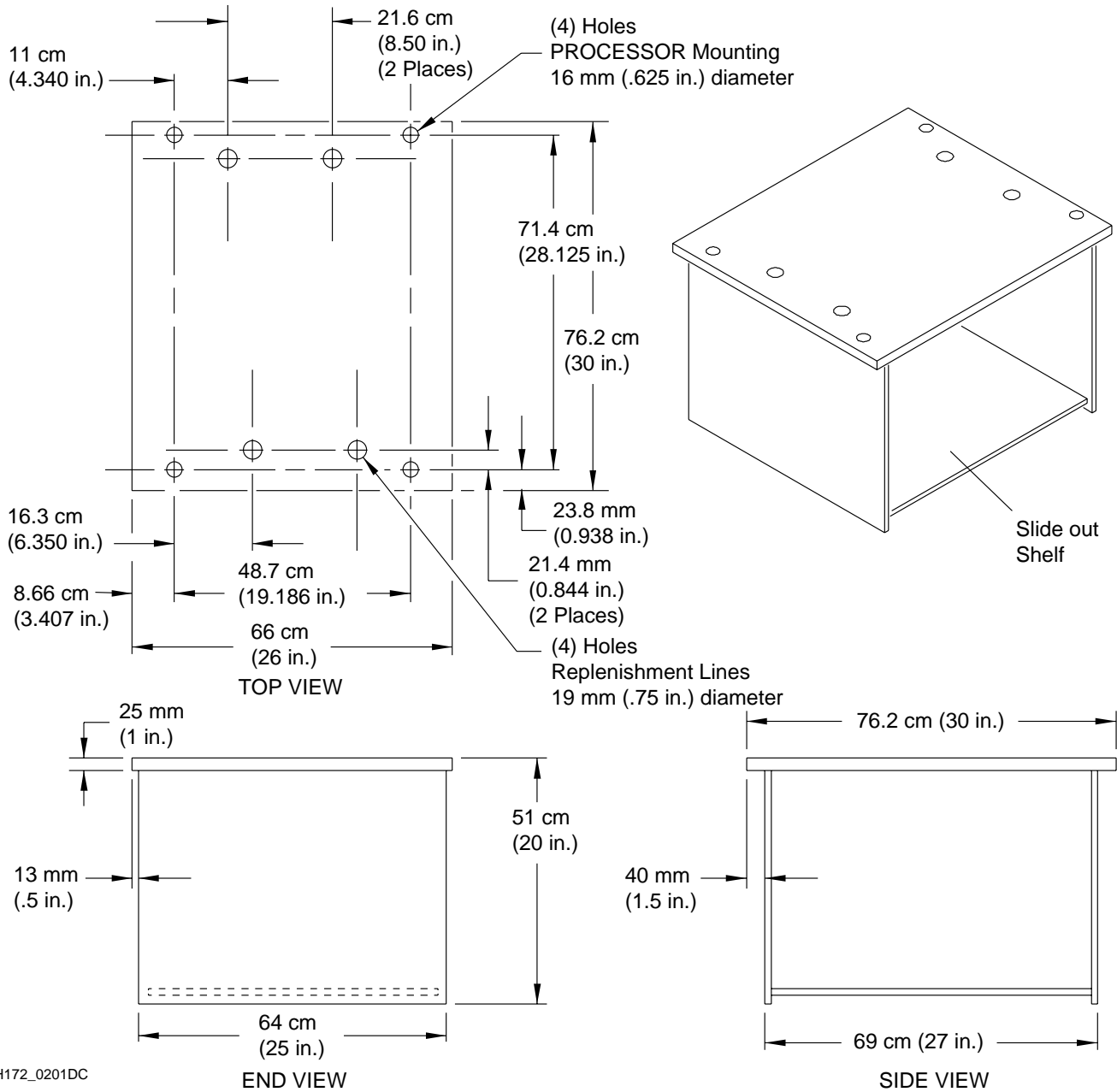
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Specifications of the Shipping Crate and Processor		Weight of the Processor	
Dimensions	Weight	With Solution	Without Solution
89 x 81 x 97 cm (35 x 32 x 38 in.)	108 kg (240 lb)	113 kg (250 lb)	90 kg (200 lb)

Processor Stand

Use a rigid Stand that can support a minimum of 225 kg (500 lbs) with the *Kodak X-Omat* 2000/2000A Processor, such as the *Kodak M35/M43 X-Omat* Mounting Stand, Catalog No. 808 1176.

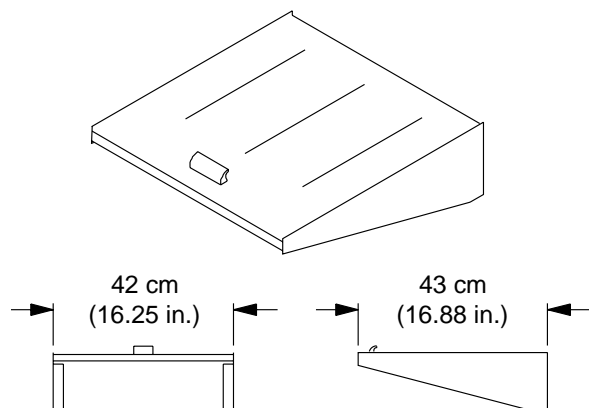
For maximum Processor stability, use Bolts to install the Processor to the Stand. Level the Stand and fasten it to the floor. Observe all local codes. The space in the base of the Stand is large enough for a *Kodak Developer-Fixer* Replenisher Tank Set, Model M7, Catalog No. 150 0537.



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Lighttight Feed Tray

The optional *Kodak M35/M43 X-Omat* Lighttight Feed Tray, Part No. 246558 is available.

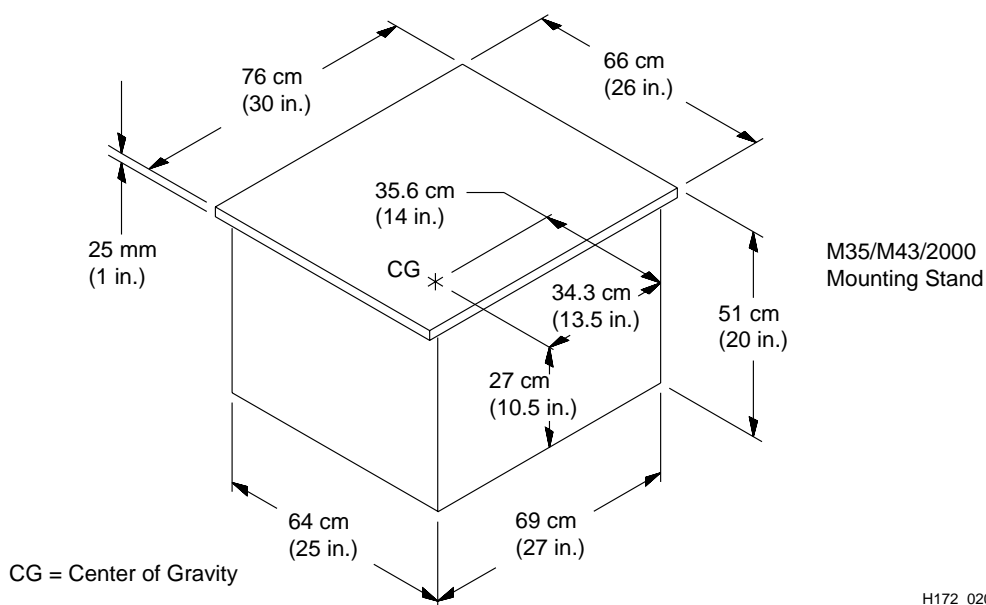
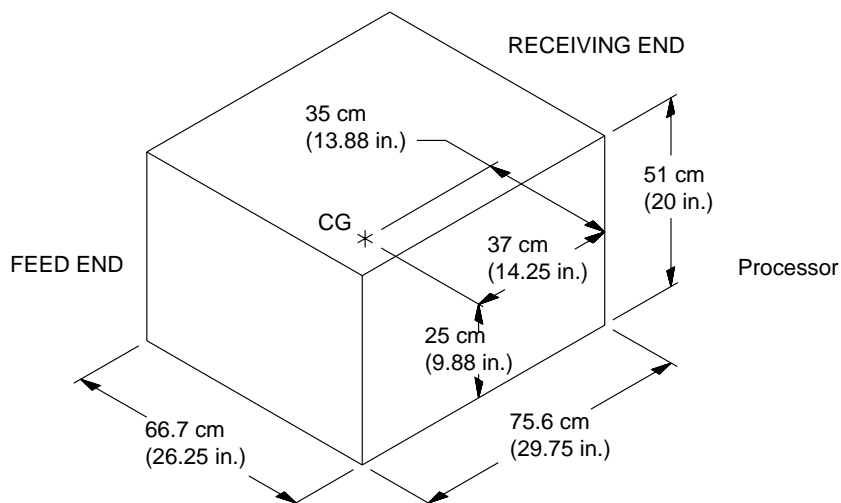


Important

You cannot feed 2 sheets of 18 x 24 cm film side by side in the Lighttight Feed Tray.

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Center of Gravity



CG = Center of Gravity

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Access and Ceiling Requirements

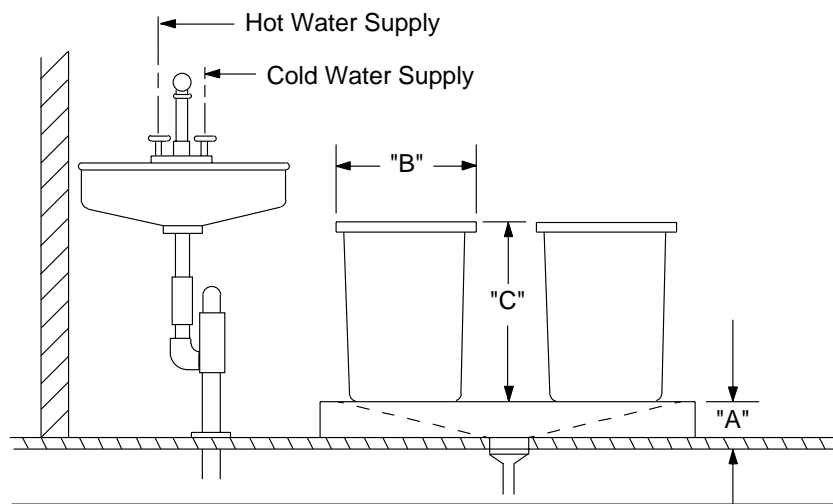


Important

If these access requirements are not provided, service time and cost may increase.

Maintenance and Operation Access Requirements		
Description	Recommended Minimum Distances	Symbol (See the Figure on Page 16)
Drive side of Processor	91 cm (36 in.)	R
Nondrive side of Processor	91 cm (36 in.)	S
Dryer side of Processor	91 cm (36 in.)	T
Feed end of Processor	91 cm (36 in.)	U
Above the Processor	91 cm (36 in.)	
Area for 14-gallon replenishment Tanks	61 x 127 cm (24 x 50 in.)	D x E
Area for 30-gallon replenishment Tanks	61 x 153 cm (24 x 60 in.)	D x E

Replenishment Tanks

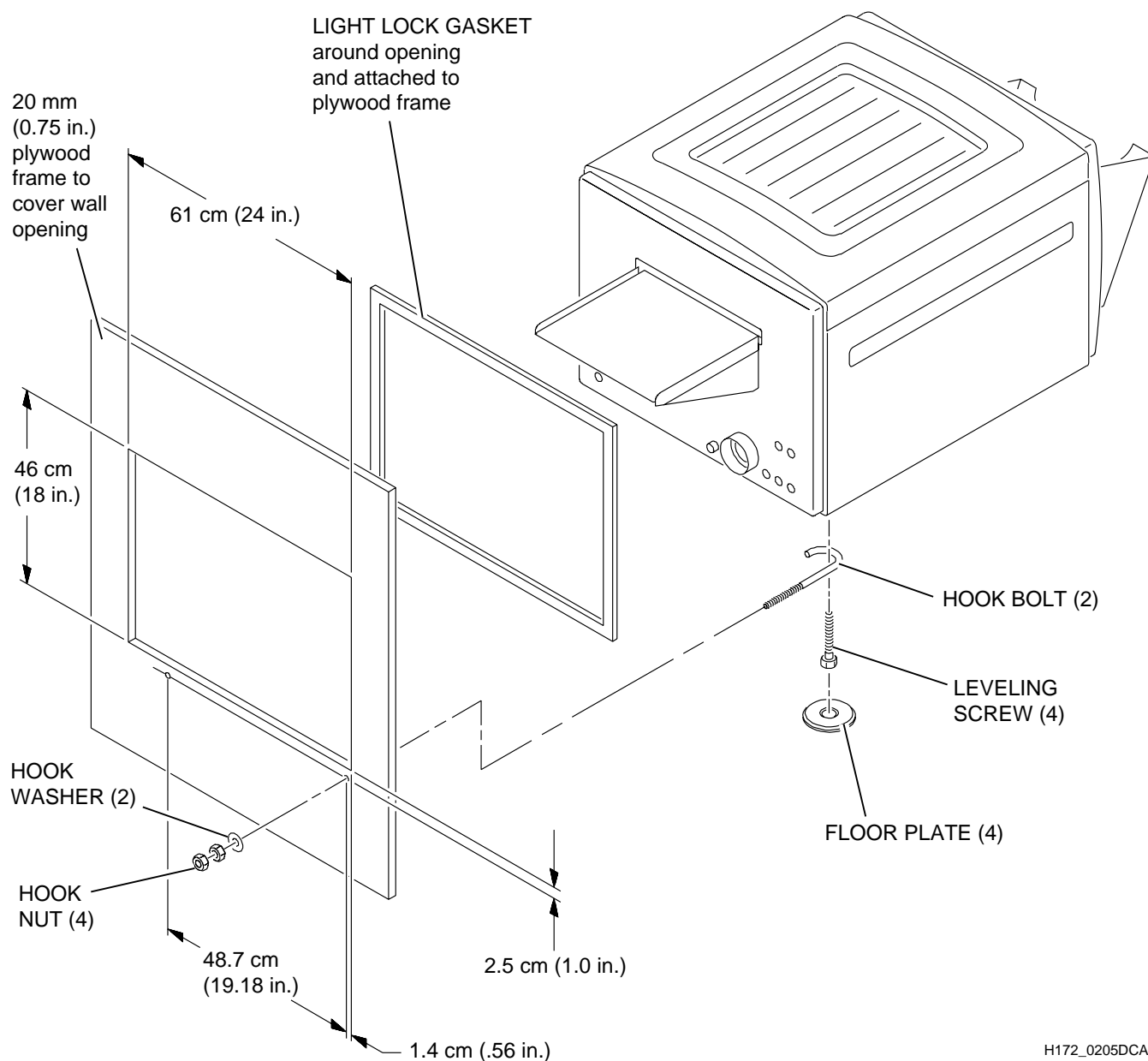


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Subject	Requirements			
Position of the Tanks	Locate the Tanks close to the water supply for mixing chemicals. Kodak provides 2 Replenishment Strainers to be installed in the Hoses between the Tanks and the Processor during installation.			
Dimensions		8 gallon	14 gallon	30 gallon
	Diameter of a Tank "B"	29 x 43 cm (12 x 17 in.)	43 cm (17 in.)	56 cm (22 in.)
	Height of a Tank "C"	32 cm (12½ in.)	58 cm (23 in.)	70.5 cm (27¾ in.)
	Floor area of 2 Tank (See Page 16, "D" and "E")	-	61 x 127 cm (24 x 50 in.)	61 x 153 cm (24 x 60 in.)
	Maximum Platform Height (See Page 16, "A")	-	48 cm (17 in.)	35 cm (14 in.)

Through-the-Wall Installation

Materials Required:

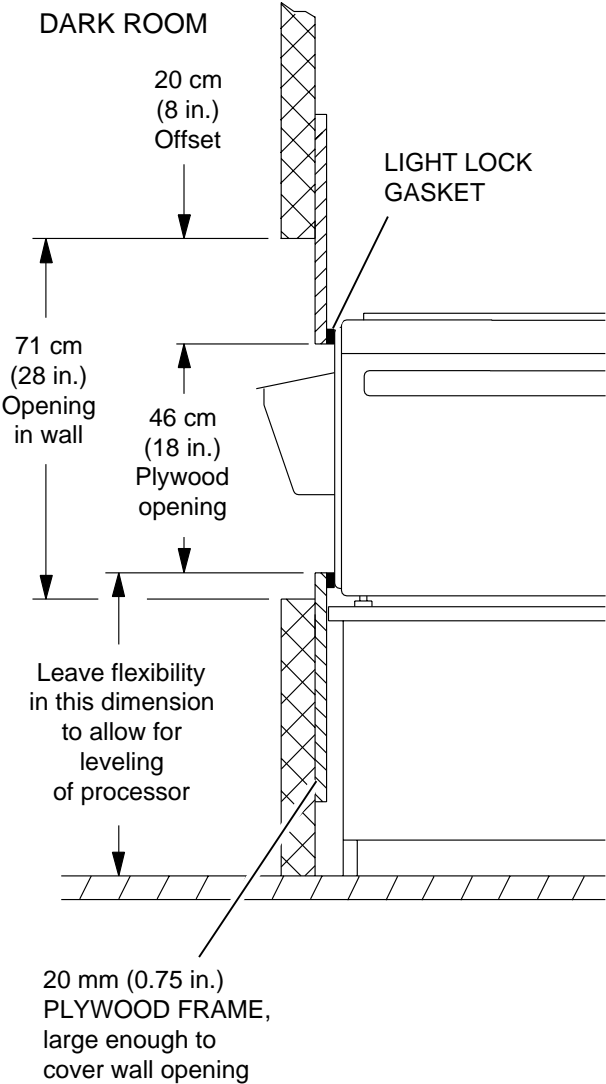


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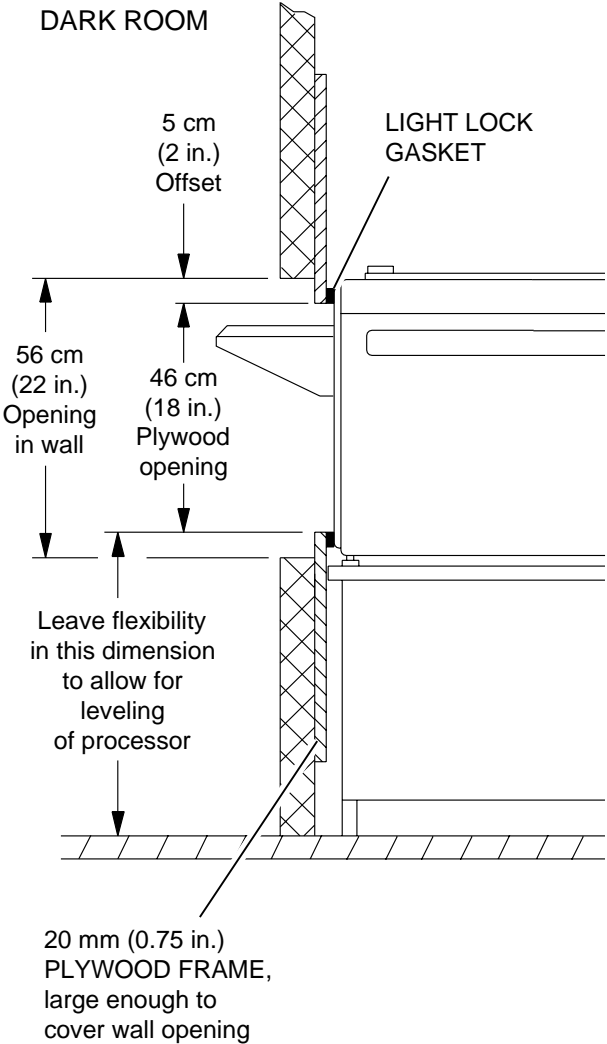
Opening Dimensions:

Receive Bin Through the Wall:

Feed Shelf Through the Wall:



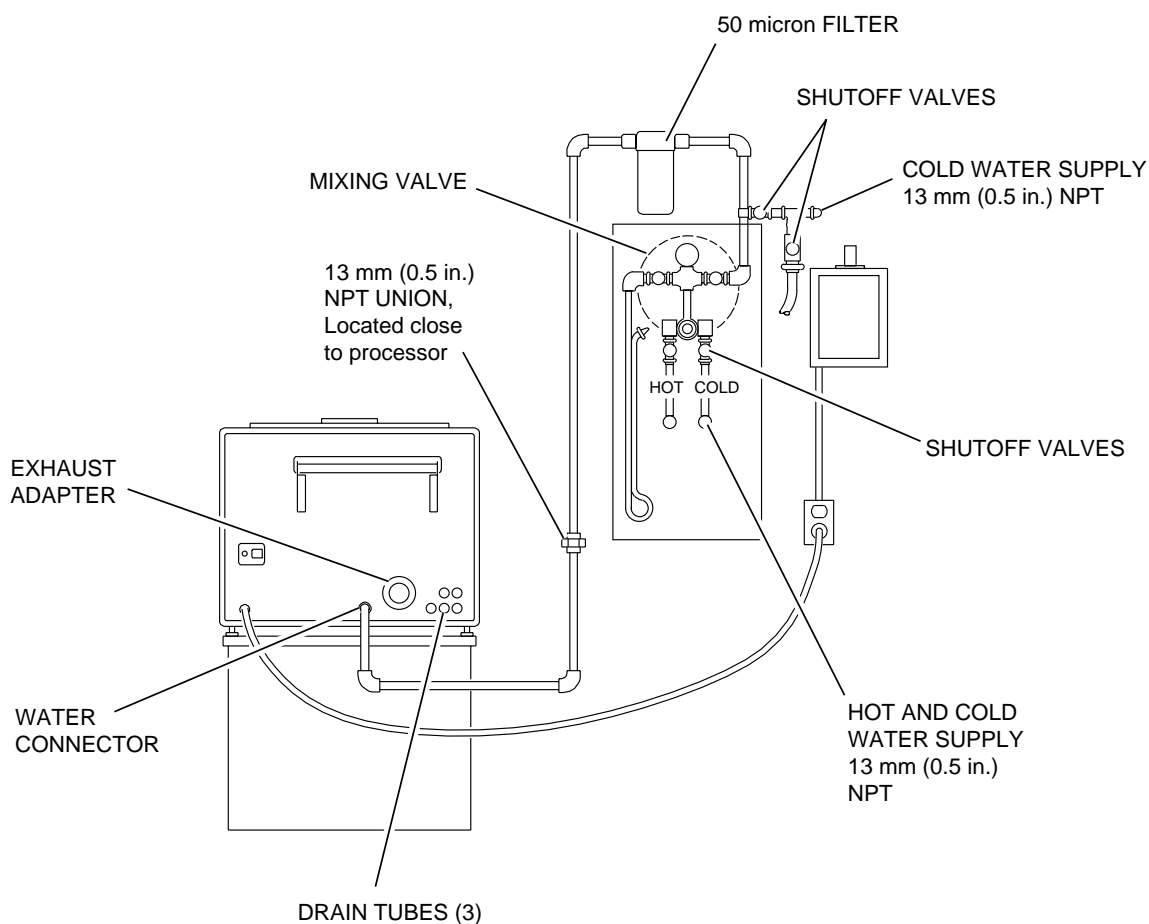
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H172_0210CC



H172_0206CCA
H172_0206CC

Section 2: Plumbing

Parts



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Part No.	Description	Quantity	How to obtain the part
452990	$\frac{3}{8}$ -in. Tubing for the Replenishment System	Order by the foot.	The customer can obtain this Tubing or Valve locally or order it from Kodak.
467621	$\frac{1}{2}$ -in. NPT <i>Kodak</i> Thermostatic Mixing Valve	1	
246802	Hose Clamp for the Drains	3	These parts are packed with the Processor.
246800	Hose Clamp for the Replenishment Hoses	6	
472261	Replenishment Strainer	2	
551400	$\frac{3}{8}$ -in. NPTM Water Connector	1	
760476	$\frac{1}{2}$ -in. Drain Tube	5.50 m (18.0 ft)	

You may find the following parts useful in installing the Processor. They are not available from Kodak.



- $\frac{1}{2}$ -in. NPT Check Valve
- 2 $\frac{1}{2}$ -in. NPT Shutoff Valves
- $\frac{1}{2}$ -in. NPT Union
- In-line Thermometer

Catalog Numbers					
Tank Kit	Replenisher Tank Size			Silver Recovery Unit	
	8 gallon	14 gallon	30 gallon		
Kodak Developer Replenisher Tank Kit	-	151 1740	102 2987	Kodak Chemical Recovery Cartridge, Model II	173 4953
Kodak Fixer Replenisher Tank Kit	-	151 1765	102 2961	Kodak Chemical Recovery Cartridge, Junior Model II	166 9431
Kodak Developer-Fixer Replenisher Tank Set, Model M7 - Can be used with the optional Mounting Stand, Catalog No. 808 1176.	150 0537	-	-	Kodak Circulating Unit, Model II	175 0868


Note

A Tubing Adapter, ½ -in. to ¼ -in. ID, Part No. 555561, is needed to connect the above Silver Recovery Units to a Processor.

Specifications

Subject	Requirements	
Codes	 Warning All plumbing requirements must comply with local and national codes. Iron Piping is <u>not</u> recommended.	
Drain	 Warning All drain material must be made of chemically resistant, non-corrosive material. Use PVC or the equivalent. The Drain must have a minimum diameter of 7.6 cm (3 in.) and no obstructions.	
	Minimum diameter	7.6 cm (3 in.)
	Capacity	1 L/min (¼ gal/min) during normal operation 40 L/min (10½ gal/min) for draining all 3 solutions together 13.2 L/min (3½ gal/min) if each solution is drained separately
	Distance from the Processor	1.5 m (60 in.) maximum
	Height from the floor	flush with the floor with the Drain lines sloping gradually down to the floor Drain
	Hoses	Drain Tubing is packed with the Processor.
	Drain	Do not make a solid connections between the Hoses and the Drain. Use corrosive resistant connections. If Elbows are necessary to direct the Hoses into the Drain, the customer can order Elbows from Kodak.
Water Supply	Location	accessible to both the Processor and the Replenishment Tanks
	Temperature	4 - 30°C (40 - 85°F) If the temperature of the water supply is higher than 30°C (85 °F), install a water chiller. Kodak suggests a tempered water supply for cleaning the Processor and for mixing chemicals manually.
	Pressure	138 - 448 kPa (20 - 65 psi) If necessary, install a Pressure Regulator and Gauge.
	Flow volume	Controlled within the Processor to 0.95 L/min (¼ gal/min), +10% -0%
	Filtration	50-micron Water Filter in the input water line
	Check Valve or Vacuum Breaker	The Processor has an internal 20 mm (0.8 in.) water gap in the wash supply system. A Check Valve should not be necessary, unless local codes require one.

Section 3: Electrical Specifications

Subject	Requirements		
Basic Service	 Warning Earth ground is required. All electrical service must comply with local and national codes.		
2000A Processor	120 V AC +6 -13%, 50/60 Hz, 20 Amp maximum, requires a Polarized Receptacle		
2000 Processor	Voltage	Hertz	Amps
	200 V AC 10%	50/60	20 maximum
	208V AC +6 -13%	60	20 maximum
	230 V AC 10%	50/60	20 maximum
	220 V AC 10%	50	20 maximum
	240 V AC +6 -13%	50/60	20 maximum
Main Power Disconnect Switch	The Switch must be: <ul style="list-style-type: none"> located on a wall adjacent to the Processor, within 2 m (7 ft), in the light room area visible and accessible from the Processor a safe distance from water 		
	For the 2000A Processor, use either a single-pole, thermomagnetic Circuit Breaker <u>or</u> a fused disconnect Switch		
	For the 2000 Processor, use either a fused disconnect switch <u>or</u> a 2-pole, thermomagnetic Circuit Breaker with a solid neutral and a common trip		

Section 4: Heating, Ventilation, and Air Conditioning

Parts

Part No.	Description	Quantity	How to obtain the part
264503	Kodak Auxiliary Ventilation Fan Kit / 110 V AC, 60 Hz Includes: Air Gap Assembly 264519	1	The customer can order these parts from Kodak or obtain equivalent parts locally.
8B7105	Kodak Auxiliary Ventilation Fan Kit, operates on 95 to 250 V AC, 47 to 63 Hz Includes: Air Gap Assembly 264519	1	
264519	Air Gap Assembly	1	

Specifications

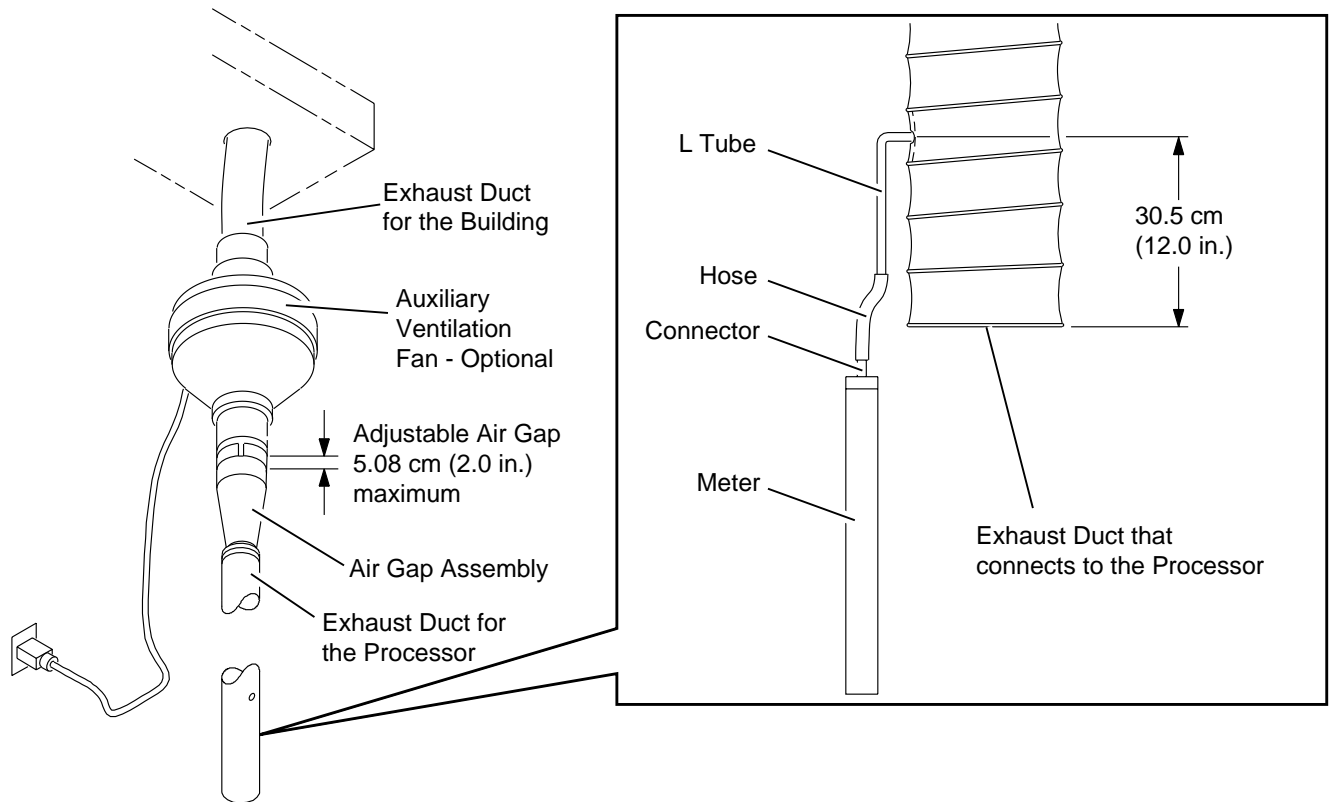
Subject	Requirements	
Room	Temperature	15 - 30°C (59 - 86°F)
	Relative Humidity	15 - 76%
	Ventilation	10 room air exchanges/hr for a room that is 3 x 3 x 3 m (10 x 10 x 10 ft)
Building Exhaust System	The system must have the following ratings:	
	Volume - full load	2,124 L/min (75 ft ³ /min) maximum, 24 hours per day
	Temperature	66°C (150°F) maximum
	Heat Load to the Room with the Processor	3400 kJ/hr (3200 BTU/hr)
	Exhaust Duct from the Processor	Diameter = 7.6 cm (3 in.)
	Exhaust Duct from the Building with an Adjustable Air Gap	Negative Pressure*
		7.6 cm (3 in.) Duct 0.76 - 1.02 mm (0.03 - 0.04 in.) of water
		10.2 cm (4 in.) Duct 0.25 - 0.51 mm (0.01 - 0.02 in.) of water
	*See the procedure on Page 15 to check the negative pressure. If the negative pressure is not correct, an Auxiliary Ventilation Fan must be installed.	

Note

For through-the-wall installations, the air pressure in the dark room must be greater than the air pressure in the light room to prevent air flowing through the Processor into the dark room. When the air pressure is correctly balanced and the Processor is correctly vented, the:

- chemical fumes and vapors will be contained
- film artifacts will be reduced

Checking the Negative Pressure



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H172_1010HC

[1] Connect the rubber Hose from the Air Meter TL-2431 to:

- L Tube
- center Connector on the Meter

[2] Make a 6.4 mm (¼ in.) hole approximately 30.5 cm (12 in.) from the end of the Exhaust Duct that will be connected to the Processor.

[3] Insert the L Tube into the 6.4 mm (¼ in.) hole until the end of the Tube is flush with the inside of the Exhaust Duct.



Important

- Hold the Meter vertically.
- Do not connect the Exhaust Duct to the Processor when checking the Negative Pressure.

[4] Use the Air Meter TL-2431 to check that the negative pressure is correct:

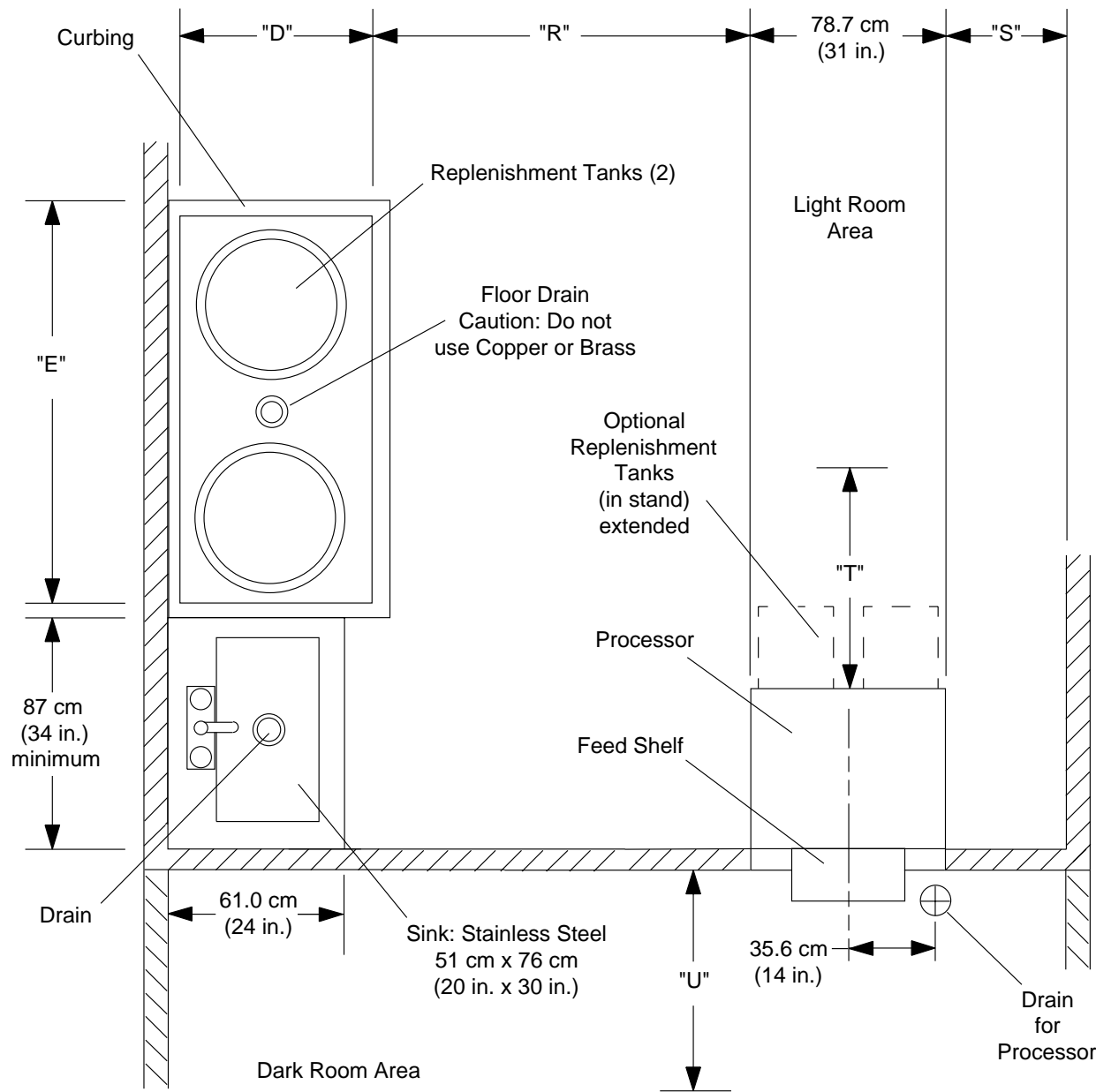
Diameter of the ExhaustDuct	Negative Pressure
7.6 cm (3.0 in.)	0.76 - 1.02 mm (0.03 - 0.04 in.) of water
10.2 cm (4.0 in.)	0.25 - .51 mm (0.01 - 0.02 in.) of water

[5] If the negative pressure is not correct, adjust the distance between the Exhaust Duct for the Building and the Exhaust Duct for the Processor. If the negative pressure cannot be obtained, install an Auxiliary Ventilation Fan.

[6] Remove the L Tube from the Exhaust Duct and seal the hole.

Section 5: Appendix A

Suggested Room Layout



H172_0208DC

Note

For dimensions "D", "E", "R", "S", "T" and "U", see the Table on Page 7.

Publication History

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Dec. 98	7C8769	N/A	All	ss3554_1_03dec98.fm	First Printing

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EASTMAN KODAK COMPANY
Rochester, NY 14650

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